

2636

**USDOE FEED MATERIALS PRODUCTION  
CENTER HAMILTON COUNTY SOLID &  
HAZARDOUS WASTE MANAGEMENT G-TSDF  
OH689008976**

**08/19/87**

**OEPA/DOE-FO  
7  
LETTER**



State of Ohio Environmental Protection Agency

Southwest District Office  
7 East Fourth Street  
Dayton, Ohio 45402-2086  
(513) 449-6357

Richard F. Celeste  
Governor

2636

August 19, 1987

Re: USDOE FEED MATERIALS PRODUCTION CENTER  
HAMILTON COUNTY  
SOLID & HAZARDOUS WASTE MANAGEMENT  
G-TSDF OH689008976

Mr. James A. Reafsnyder-Site Manager  
Department of Energy  
P.O. Box 398705  
Cincinnati, OH 45239

Dear Mr. Reafsnyder:

On August 19, 1987, Rich Bendula, a geologist of our office, reviewed the groundwater monitoring section to complete the TSD inspection for Feed Materials Production Center. It appears as though you are in compliance with Ohio's Hazardous Waste Rules for groundwater monitoring under OAC 3745-65-90 thru 94, and USEPA's Hazardous Waste Regulations for groundwater monitoring under 40 CFR 267.50 thru 267.53. The completed inspection form for this section is enclosed.

If you have any questions regarding this section of the inspection contact me or Rich Bendula at (513) 449-6357.

Sincerely,

*Scott R. Shane*

Scott R. Shane  
Solid & Hazardous Waste Management

SRS/1a1

cc: Dave Sholtis - OEPA/CO  
Dan Watson - USEPA, Cleveland  
Katherine McCord - USEPA, Chicago

AUG 24 1987

Date Rec'd \_\_\_\_\_  
Log 1-2-17  
File 9336  
Library \_\_\_\_\_

# RCRA INTERIM STATUS INSPECTION FORM

## SUBPART F: GROUNDWATER MONITORING

2636

Type of facility: (check appropriately)

- a) surface impoundment
- b) landfill
- c) land treatment facility

| Yes                                 | No                                  | Unknown                  | Waived                   |
|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**NOTE:** UNDER INTERIM STATUS STANDARDS A WASTE PILE IS NOT SUBJECT TO GROUNDWATER MONITORING REQUIREMENTS. PLEASE NOTE, HOWEVER, THAT IF ANY HAZARDOUS WASTE FROM A WASTE PILE IS LEFT IN PLACE AT CLOSURE, THE "WASTE PILE" BECOMES A "LANDFILL" AND MUST MEET POST-CLOSURE RULES APPLICABLE TO LANDFILLS.

### Groundwater Monitoring Program

1. Was the groundwater monitoring program reviewed prior to site visit?  
If "No",

a) Was the groundwater program reviewed at the facility prior to site inspection?

2. Has a groundwater monitoring program (capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility) been implemented?  
265.90(a) [3745-65-90(A)]

3. Has at least one monitoring well been installed in the uppermost aquifer hydraulically upgradient from the limit of the waste management area? 265.91(a)(1) [3745-65-91(A)(1)]

a) Are groundwater samples from the uppermost aquifer, representative of background groundwater quality and not affected by the facility (as ensured by proper well number, location and depths)?

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Uppermost  
aquifer not  
completely  
monitored

Upgradient well  
does not monitor  
same stratigraphic  
units

|   | <u>Yes</u> | <u>No</u>  | <u>Unknown</u> | <u>Waived</u>   |
|---|------------|------------|----------------|---|
| 4. Have at least three monitoring wells been installed hydraulically downgradient at the limit of the waste handling or management area? 265.91(a)(2) [3745-65-91(A)(2)]  | <u>✓</u>   | <u>—</u>   |                | <u>—</u>  |
| a) Do well number, locations and depths ensure prompt detection of any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate from the waste management area to the uppermost aquifer? | <u>—</u>   | <u>✓</u>   |                | Need additional cluster wells which are properly constructed to monitor upper aquifer |
| 5. Have the locations of the waste management areas been verified to conform with information in the groundwater program?   | <u>✓</u>   | <u>—</u>   | <u>—</u>       |   |
| a) If the facility contains multiple waste management components, is each component adequately monitored?   | <u>—</u>   | <u>N/A</u> | <u>—</u>       |   |
| 6. Do the numbers, locations, and depths of the groundwater monitoring wells agree with the data in the groundwater monitoring system program? If "No", explain discrepancies.  | <u>✓</u>   | <u>—</u>   | <u>—</u>       |   |
| 7. Well completion details. 265.91(c) [3745-65-91(C)]   |            |            |                |   |
| a) Are wells properly cased?  | <u>✓</u>   | <u>—</u>   | <u>—</u>       |   |
| b) Are wells screened (perforated) and packed where necessary to enable sampling at appropriate depths?   | <u>✓</u>   | <u>—</u>   | <u>—</u>       | See comment on 4a.  |
| c) Are annular spaces properly sealed to prevent contamination of groundwater?  | <u>✓</u>   | <u>—</u>   | <u>—</u>       |   |

*sampled +  
analyzed*

6636

|   | Yes                                 | No                       | Unknown                  | Waived   |
|---|-------------------------------------|--------------------------|--------------------------|--|
| 8. Has a groundwater sampling and analysis plan been developed?<br>265.92(a) [3745-65-92(A)]  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/>  |
| a) Has it been followed?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| b) Is the plan kept at the facility?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| c) Does the plan include procedures and techniques for:   |                                     |                          |                          |  |
| 1) Sample collection?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          |  |
| 2) Sample preservation?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          |  |
| 3) Sample shipment?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          |  |
| 4) Analytical procedures?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          |  |
| 5) Chain of custody control?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          |  |
| 9. Are the required parameters in groundwater samples being tested<br>quarterly for the first year? 265.92(b) [3745-65-92(B)]<br>and 265.92(c)(1) [3745-65-92(C)]   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          | <i>missed 2<sup>nd</sup> quarter<br/>sampling but made<br/>up missed event</i> |
| a) Are the groundwater samples analyzed for the following:  |                                     |                          |                          |  |
| 1) Parameters characterizing the suitability of the groundwater<br>as a drinking water supply? 265.92(b)(1) [3745-65-92(B)(1)]  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          |  |
| 2) Parameters establishing groundwater quality?<br>265.92(b)(2) [3745-65-92(B)(2)]  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          |  |
| 3) Parameters used as indicators of groundwater contamination?<br>265.92(b)(2) [3745-65-92(B)(3)]   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          |  |
| (1) For each indicator parameter are at least four replicate<br>measurements obtained at each upgradient well for each sample<br>obtained during the first year of monitoring?<br>265.92(c)(2) [3745-65-92(C)(2)] | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                          |  |

|  | Yes | No  | Unknown | Waived  |
|--|-----|-----|---------|---|
| (11) Are provisions made to calculate the initial background arithmetic mean and variance of the respective parameter concentrations or values obtained from the upgradient well(s) during the first year? 265.92(c)(2) [3745-65-92(C)(2)] | —   | ✓   |         | W   |
| b) For facilities which have completed first year groundwater sampling and analysis requirements:  |     |     |         | JUST beginning 2nd year of sampling. If sampling plan is followed, then these items will be checked yes |
| 1) Have samples been obtained and analyzed for the groundwater quality parameters at least annually? 265.92(d)(1) [3745-65-92(D)(1)]   | —   | N/A | —       |   |
| 2) Have samples been obtained and analyzed for the indicators of groundwater contamination at least semi-annually? 265.92(d)(2) [3745-65-92(D)(2)]   | —   | N/A | —       |   |
| c) Were groundwater surface elevations determined at each monitoring well each time a sample was taken? 265.92(e) [3745-65-92(E)]  | —   | N/A | —       |   |
| d) Were groundwater surface elevations evaluated annually to determine whether the monitoring wells are properly placed? 265.92(f) [3745-65-92(E)]   | —   | N/A | —       |   |
| e) If it was determined that modification of the number, location or depth of monitoring wells was necessary, was the system brought into compliance with 265.91(a) [3745-65-91(A)]? 265.93(f) [3745-65-93(F)]                             | —   | N/A | —       |   |
| 10. Has an outline of a groundwater quality assessment program been prepared? 265.93(a) [3745-65-93(A)]  | —   | ✓   |         |   |
| a) Does it describe a program capable of determining:  |     |     |         |   |
| 1) Whether hazardous waste or hazardous waste constituents have entered the groundwater?   | —   | ✓   |         |   |
| 2) The rate and extent of migration of hazardous waste or hazardous waste constituents in groundwater?   | —   | ✓   |         |   |
| 3) Concentrations of hazardous waste or hazardous waste constituents in groundwater?   | —   | ✓   |         |   |

Yes No Unknown Waived

See comment 96.

b) After the first year of monitoring, have at least four replicate measurements of each indicator parameter been obtained for samples taken for each well? 265.93(b) [3745-65-93(B)]

— N/A —

CO

1) Were the results compared with the initial background means from the upgradient well(s) determined during the first year?

— ✓ —

(1) Was each well considered individually?

— ✓ —

(11) Was the Student's t-test used (at the 0.01 level of significance?)

— ✓ —

2) Was a significant increase (or pH decrease as well) found in the:

(1) Upgradient wells (If "Yes", Compliance Checklist A-2 must also be completed.) [3745-65-93(C)(1)]

— N/A —

(11) Downgradient wells

— N/A —

11. Have records been kept of analyses for parameters in 265.92(c) and (d) [3745-65-92(C) and (D)]? 265.94(a)(1) [3745-65-94(A)(1)]

✓ —

12. Have records been kept of groundwater surface elevations taken at the time of sampling for each well? 265.94(a)(1) [3745-65-94(A)(1)]

✓ —

If "Yes", owner or operator must obtain, split, and analyze additional samples from the wells where a significant difference was detected. If the difference is confirmed, the Director should be notified in writing within 7 days and a groundwater assessment plan within 15 days. [3735-65-93(C)(2) and (D)(2)(3)]

13. Have records been kept of required elevations in 265.93(b) [3745-65-93(B)]? 265.94(a)(1) [3745-65-94(A)(1)]

✓ —

14. Have the following been submitted to the Regional Administrator: 265.94(a)(2) [3745-65-94(A)(2)]

a) Initial background concentrations of parameters listed in 265.92(b) [3745-65-92(B)] within 15 days after completing each quarterly analysis required during the first year?

✓ —

2636

| <u>Yes</u> | <u>No</u> | <u>Unknown</u> | <u>Waived</u> |
|------------|-----------|----------------|---------------|
|------------|-----------|----------------|---------------|

b) For each well, have any parameters whose concentrations or values have exceeded the maximum contaminant levels allowed in drinking water supplied been separately identified?

|   |   |  |  |
|---|---|--|--|
| — | ✓ |  |  |
|---|---|--|--|

2/

c) Annual reports including: [3745-65-94(A)(2)]

1) Concentrations or values of parameters used as indicators of groundwater contamination for each well along with required evaluations under 265.93(b) [3745-65-93(B)]?

|   |   |  |  |
|---|---|--|--|
| — | ✓ |  |  |
|---|---|--|--|

2) Any significant differences from initial background values in upgradient wells separately identified?

|   |     |   |  |
|---|-----|---|--|
| — | N/A | — |  |
|---|-----|---|--|

3) Results of the evaluation of groundwater surface elevations?

|   |   |  |  |
|---|---|--|--|
| ✓ | — |  |  |
|---|---|--|--|

Comments: Subpart F